

Please add the following new claims:

6. (New) An arc tube comprising:

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an arc-tube body which incorporates a light-emission tube having a discharge space and pinch seal portions formed on two sides of said discharge space, said tube being made of a quartz glass; and

a pair of tungsten electrodes pinch-sealed to said pinch seal portions, respectively, such that leading ends of said pair of tungsten electrodes project into said discharge space, wherein

average roughness of a surface of each of said tungsten electrodes is between .3 μm and 3 μm .
